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EXAMINER

DAVIS, ZACHARY A

ART UNIT PAPER NUMBER

2137

DATE MAILED: 04/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/638,164

Applicant(s)

FURUKAWA ET AL.

Examiner

Zachary A. Davis

Art Unit

2137

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 January 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 49 and 52 is/are allowed.  
6) ☒ Claim(s) See Continuation Sheet is/are rejected.  
7) ☒ Claim(s) 16, 36, 41 and 47 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 05 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

Continuation of Disposition of Claims: Claims pending in the application are 1-4,6,8-10,12-18,22,23,25,27,28,30-33,35-39,41-45,47-49,52,53,56-58,60 and 61.

Continuation of Disposition of Claims: Claims rejected are 1-4,6,8-10,12-15,17,18,22,23,25,27,28,30-33,35,37-39,42-45,47,48,53,56-58,60 and 61.

### **DETAILED ACTION**

1. An amendment was received on 03 January 2005. Claims 1, 4, 8-10, 15-18, 23, 25, 27, 28, 32, 33, 35, 36, 38, 41, 42, 45, 47-49, 52, 53, and 56-58 have been amended. Claims 5, 7, 11, 19-21, 24, 26, 29, 34, 40, 46, 50, 51, 54, 55, and 59 have been canceled. No new claims have been added. Claims 1-4, 6, 8-10, 12-18, 22, 23, 25, 27, 28, 30-33, 35-39, 41-45, 47-49, 52, 53, 56-58, 60, and 61 are currently pending in the present application.

### ***Oath/Declaration***

2. The Declaration received 05 August 2004 is accepted.

### ***Response to Arguments***

3. Applicant's arguments filed 03 January 2005, regarding the rejections of Claim 22 under 35 U.S.C. 102(e) as anticipated by Matsumoto et al, US Patent 6320829, and of Claims 23- under 35 U.S.C. 102(e) as anticipated by Tosaki et al, US Patent 6590846, have been fully considered but they are not persuasive.

Regarding the rejections of Claims 23, 25, 27, 28, 30-32, 35, 53, 56-58, 60, and 61, Applicant argues that Tosaki does not disclose that a plurality of copyright control information areas are spaced apart by a predetermined interval, nor that the same

information is stored in the plurality of copyright control information areas. The Examiner respectfully disagrees. The Examiner believes that Tosaki does indeed disclose a plurality of copyright control information areas spaced apart by a predetermined interval (see column 8, lines 1-3, and Figure 2, elements 3 and 14, describing the first control data area including embossed elements spaced apart at intervals). The Examiner further believes that the plurality of areas store the same information (see again column 8, lines 1-3, noting that the plurality of embossed elements all are part of the first control area).

Regarding the rejection of Claim 22, Applicant argues that Matsumoto does not disclose reproducing data of the error correction block that does not contain copyright control information and that does not have an error. However, the Examiner believes that Matsumoto does disclose such a limitation, noting that at column 9, lines 14-21, Matsumoto discloses that data is reproduced if it is determined that it is permissible to do so, based on the presence of copyright control information, which has been error corrected. It is noted that Applicant concedes that Matsumoto does disclose that the data is error correction encoded.

For the above reasons, the Examiner maintains these grounds of rejection, as set forth below.

4. Applicant's arguments with respect to claims 10, 12-15, 17, 18, 37-39, 42-45, and 48 have been considered but are moot in view of the new ground(s) of rejection.

***Specification***

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See below, regarding the rejection of Claims 1-6 and 9 under 35 U.S.C. 112, first paragraph.

***Claim Objections***

6. Applicant is advised that should claim 56 be found allowable, claim 57 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

***Claim Rejections - 35 USC § 112***

7. The rejection of Claims 10-18 and 34-44 under 35 U.S.C. 112, first paragraph, and the rejection of Claims 1-21, 25, 33, 36, 41, 42, 46-48, 51, 54, 55, and 57 under 35 U.S.C. 112, second paragraph, as set forth in the previous Office action, are withdrawn in light of the amendments to the Claims.

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8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 1-4, 6, and 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 has been amended to include the limitation of "a *plurality of copyright control information areas spaced apart by a predetermined interval* in which is written the same copyright control information necessary for decrypting *the* encrypted digital data". The rules of grammar state that a modifying phrase must be placed as close as possible to the word it modifies. See "Misplaced and Dangling Modifiers" from the University of Ottawa's *HyperGrammar*, noting especially the section "Misplaced Phrases and Clauses". Claim 1 as amended therefore requires that the copyright control information be written *in the predetermined interval*. The application as originally filed only describes writing the copyright control information *within the copyright control information areas*. The originally filed application therefore fails to provide an adequate written description of the claimed invention.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 depends from canceled Claim 7, which renders the claim indefinite.

***Claim Rejections - 35 USC § 101***

12. The rejections of Claims 1-9, 23-31, and 53-61 under 35 U.S.C. 101 as set forth in the previous Office action is withdrawn in light of the amendments to the claims. It is noted that the limitation of embossed copyright control areas sets forth a clear interrelationship between the function and structure of the data storing media, and therefore places the claims within the statutory classes of invention.

***Claim Rejections - 35 USC § 102***

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.



14. Claim 22 is rejected under 35 U.S.C. 102(e) as being anticipated by Matsumoto et al, US Patent 6320829.

In reference to Claim 22, Matsumoto discloses a data reproducing method including determining that an error correction block is not error corrected (column 8, lines 60-65, where errors are detected if present) and reproducing data that does not have an error and does not contain the copy control information (column 9, lines 14-21, where the data is reproduced if it is determined that it is allowable or permissible to do so).

15. Claims 23, 25, 27, 28, 30-32, 35, 53, 56-58, 60, and 61 are rejected under 35 U.S.C. 102(e) as being anticipated by Tosaki et al, US Patent 6590846.

In reference to Claim 23, Tosaki discloses a data storing medium including a first area in which digital data is written (column 5, line 67-column 6, line 1) and a second area in which control data is written (the first control data area of column 6, lines 10-14), the second area having a write-prohibited portion (the first control data area can be embossed, column 6, lines 14-16), where the second area includes a plurality of portions spaced apart by predetermined intervals and containing the same copyright control data (column 8, lines 1-3; Figure 2, elements 3 and 14, noting that the embossed elements are spaced apart at intervals, further noting that all of the embossed elements are part of the first control data area containing copyright control data).

In reference to Claim 25, Tosaki further discloses that a sector containing the copyright control information is write-prohibited (column 6, lines 14-16).

In reference to Claim 27, Tosaki further discloses that a plurality of write-prohibited areas is formed at intervals (column 8, lines 1-3; Figure 2, elements 3 and 14).

In reference to Claim 28, Tosaki further discloses that the data storing medium is a recordable optical storing medium (the DVD-R of column 7, lines 54-55) and that the write-prohibited portion is pre-formed in the second area (the first control data area can be embossed, column 6, lines 14-16).

In reference to Claim 30, Tosaki further discloses that the second area is read earlier than the first area (the control data area is located at the inner periphery of the disk, column 6, lines 2-4).

In reference to Claim 31, Tosaki further discloses that the digital data in the first area is encrypted (column 3, lines 56-59, where data is ciphered).

In reference to Claim 32, Tosaki discloses a data reproducing method including reading control data (column 7, lines 37-41) from two locations in a second area (column 8, lines 1-3), determining that the control data has been correctly read (column 7, lines 41-51), and reproducing digital data corresponding to the control data (column 7, lines 27-31).

In reference to Claim 35, Tosaki discloses a data writing method including writing control data to a second area of a data storing medium (column 6, lines 6-10) and that the control data contains copyright control data for the digital data in a first area of the data storing medium (column 6, lines 10-13).

In reference to Claim 53, Tosaki discloses a data storing medium including a first area in which digital data is written (column 5, line 67-column 6, line 1) and a second area in which control data is written (the first control data area of column 6, lines 10-14), the second area having a write-prohibited portion (the first control data area can be embossed, column 6, lines 14-16), where the second area includes two spaced apart locations having the same copyright control information written in each of the locations (column 8, lines 1-3; Figure 2, elements 3 and 14, noting that the embossed elements are spaced apart at intervals, further noting that all of the embossed elements are part of the first control data area containing copyright control data).

In reference to Claims 56 and 57, Tosaki further discloses that a plurality of write-prohibited areas is formed at intervals (column 8, lines 1-3; Figure 2, elements 3 and 14).

In reference to Claim 58, Tosaki further discloses that the data storing medium is a recordable optical storing medium (the DVD-R of column 7, lines 54-55) and that the write-prohibited portion is pre-formed in the second area (the first control data area can be embossed, column 6, lines 14-16).

In reference to Claim 60, Tosaki further discloses that the second area is read earlier than the first area (the control data area is located at the inner periphery of the disk, column 6, lines 2-4).

In reference to Claim 61, Tosaki further discloses that the digital data in the first area is encrypted (column 3, lines 56-59, where data is ciphered).

***Claim Rejections - 35 USC § 103***

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 10, 12-15, 17, 18, 33, 37-39, 42-45, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tosaki in view of Matsumoto.

In reference to Claim 10, Tosaki discloses a data recording apparatus including means for writing encrypted digital data (column 6, lines 63-64) and copyright control information (column 6, lines 52-56). Tosaki further discloses a write-prohibited area containing the copyright control information (the first control data area can be embossed, column 6, lines 14-16). However, Tosaki does not disclose encoding with error correction code.

Matsumoto discloses a copy control system in which data is encoded with error correction code (column 8, lines 30-44). Therefore, it would have been obvious to one

of ordinary skill in the art at the time the invention was made to modify the apparatus of Tosaki to include encoding data with error correction code, in order to prevent unauthorized copying of digital data more effectively by allowing the use of different forms and levels of copy restriction (see Matsumoto, column 2, lines 25-27).

In reference to Claim 12, Matsumoto further discloses that data is not corrected by an error correcting process (errors intentionally added are detected but not necessarily corrected, column 8, line 65-column 9, line 3).

In reference to Claims 13 and 14, Matsumoto further discloses that the error correcting process is an error detecting and correcting process (column 8, lines 30-37).

In reference to Claim 15, Matsumoto further discloses that different data is combined with copyright control information (error information is added to other than the main data, column 8, lines 38-44) and that data is encoded with error correction code (column 8, lines 33-36).

In reference to Claim 17, Matsumoto further discloses that data is modulated by 8-16 modulation (Figure 2, 8-16 modulator 16; column 8, lines 47-51). Further, Tosaki discloses that the data is modulated (Figure 3, modulation circuit 13).

In reference to Claim 18, Tosaki discloses a data recording method including writing encrypted digital data and copyright control information to a data storing medium (column 6, lines 52-64). However, Tosaki does not disclose encoding with error correction code.

Matsumoto discloses a copy control system in which data is encoded with error correction code (column 8, lines 30-44). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Tosaki to include encoding data with error correction code, in order to prevent unauthorized copying of digital data more effectively by allowing the use of different forms and levels of copy restriction (see Matsumoto, column 2, lines 25-27).

In reference to Claim 33, Tosaki discloses everything as applied to Claim 32 above. However, Tosaki does not disclose detecting an error from control data or reproducing digital data using control data of which an error flag has not been set.

Matsumoto discloses a copy control system including detecting an error in data (column 8, lines 60-65) and reproducing digital data using control data for which an error flag has not been set (data is reproduced based on the output of the media mark detecting unit and other judgments, column 9, lines 14-21). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Tosaki to include error detection and reproduction of data using control data for which an error flag has not been set, in order to prevent unauthorized copying of digital data more effectively by allowing the use of different forms and levels of copy restriction (see Matsumoto, column 2, lines 25-27).

In reference to Claim 37, Tosaki discloses everything as applied to Claim 35 above. However, Tosaki does not disclose that the copyright control information is

reproduction-prohibited by combining different data with the copyright control information and encoding the data with error correction code.

Matsumoto discloses a copy control system in which different data is combined with copyright control information (error information is added to other than the main data, column 8, lines 38-44) and is encoded with error correction code (column 8, lines 33-36). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Tosaki to include combining different data with the copyright control information and to include the use of error correction code, in order to prevent unauthorized copying of digital data more effectively by allowing the use of different forms and levels of copy restriction (see Matsumoto, column 2, lines 25-27).

In reference to Claim 38, Tosaki discloses a data writing method including writing different data to the second area of a data storing medium (column 6, lines 6-10). However, Tosaki does not disclose that data is not corrected by an error correcting process.

Matsumoto discloses a copy control system in which data is not corrected by an error correcting process (errors intentionally added are detected but not necessarily corrected, column 8, line 65-column 9, line 3). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Tosaki, to include data that is not corrected by an error correcting process, in order to

prevent unauthorized copying of digital data more effectively by allowing the use of different forms and levels of copy restriction (see Matsumoto, column 2, lines 25-27).

In reference to Claim 39, Tosaki further discloses that the different data is reproduction-prohibited (column 6, lines 14-16).

In reference to Claim 42, Matsumoto further discloses that false data is combined with copyright control information (error information is added to other than the main data, column 8, lines 38-44) and that data is encoded with error correction code (column 8, lines 33-36).

In reference to Claim 43, Tosaki further discloses that the digital data written to the first area is encrypted (column 3, lines 56-59, where data is ciphered).

In reference to Claim 44, Tosaki further discloses that the different data contains copyright control information about the digital data written to the first area (column 6, lines 10-13).

In reference to Claim 45, Tosaki discloses a data writing apparatus including a writing portion (column 6, lines 52-55) and a data processing portion for supplying data to the writing portion (column 6, lines 55-64) such that at least part of the control data is reproduction-prohibited (column 6, lines 14-16). However, Tosaki does not disclose that data is not corrected by an error correcting process.

Matsumoto discloses a copy control system in which data is not corrected by an error correcting process (errors intentionally added are detected but not necessarily corrected, column 8, line 65-column 9, line 3). Therefore, it would have been obvious to



one of ordinary skill in the art at the time the invention was made to modify the apparatus of Tosaki, to include data that is not corrected by an error correcting process, in order to prevent unauthorized copying of digital data more effectively by allowing the use of different forms and levels of copy restriction (see Matsumoto, column 2, lines 25-27).

In reference to Claim 48, Matsumoto further discloses that different data is combined with copyright control information (error information is added to other than the main data, column 8, lines 38-44) and that data is encoded with error correction code (column 8, lines 33-36).

***Allowable Subject Matter***

18. Claims 49 and 52 are allowed.

19. Claims 16, 36, 41, and 47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

20. Claims 1-4, 6, and 9 would be allowable if the rejections under 35 U.S.C. 112, first paragraph, set forth in this Office action were overcome.

21. The following is a statement of reasons for the indication of allowable subject matter:

Claims 16, 36, 41, 47, and 49 are directed to data recording apparatus and data writing methods that include a form of copyright control data. Each of the claims

includes the limitation of a process converting copyright control data "in such a manner that a relation of  $2a + b \geq d$  is satisfied, where 'a' is a number of lines that are not erased as an error of the copyright control data, 'b' is a number of lines that are erased thereof, and 'd' is a minimum distance of the error correction code." This limitation is neither taught nor suggested in any of the cited prior art, including the closest prior art, Tosaki and Matsumoto.

Claim 1 is directed to a data storing medium that includes a digital data area, a control data area, and plurality of copyright control information areas spaced apart by a predetermined interval. The closest prior art, Tosaki et al, also discloses a data storing medium that includes, *inter alia*, a plurality of copyright control information areas spaced apart by a predetermined interval. However, Tosaki neither teaches nor suggests the limitation that copyright control information is written in the predetermined interval of space between the copyright control areas.

### ***Conclusion***

22. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary A. Davis whose telephone number is (571) 272-3870. The examiner can normally be reached on weekdays 8:30-6:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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